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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,120	04/27/2001	Sara H. Basson	YOR920010063US1	1052

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EXAMINER

VO, HUYEN X

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,120

Applicant(s)

BASSON ET AL.

Examiner

Huyen Vo

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/18/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6, 10-12, 18, 20-21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bregler (US Patent No. 5880788).

3. Regarding claim 1, Bregler discloses an apparatus for presenting images representative of one or more words in an utterance with corresponding decoded speech, the apparatus comprising:

a visual detector, the visual detector capturing images of body movements corresponding to one or more words in the utterance (*col. 4, ln. 1-31 & col. 7, ln. 1-11*);

a visual feature extractor coupled to the visual detector, the visual feature extractor receiving time information from an automatic speech recognition (ASR) system and operatively processing the captured images into one or more image segments based on the time information relating to one or more words, decoded by the ASR system, in the utterance, each image segment comprising a plurality of successive images in time corresponding to a decoded word in the utterance (*col. 4, ln. 32 to col. 5, ln. 48, the visual feature extractor is the image analysis S2 in figure 1, which analyze*

movement of the lips. The timing information is interpreted as phonetic information that is used to process the captured images into one or more image segments); and

an image player operatively coupled to the visual feature extractor, the image player receiving and presenting each image segment with the corresponding decoded word (*figures 6-7, the decoded word can be presented audibly*).

4. Regarding claim 10, Bregler discloses an apparatus for presenting images representative of one or more words in an utterance with corresponding decoded speech, the apparatus comprising:

an automatic speech recognition (ASR) engine for converting the utterance into one or more decoded words, the ASR engine generating time information associated with each of the decoded words (*col. 5, ln. 28-48, phonetic information is the time-stamp used to link corresponding image segments*);

a visual detector, the visual detector capturing images of body movements corresponding to one or more words in the utterance (*col. 4, ln. 1-31 & col. 7, ln. 1-11*);

a visual feature extractor coupled to the visual detector, the visual feature extractor receiving the time information from the ASR engine and operatively processing the captured images into one or more image segments based on the time information relating to the decoded words, each image segment comprising a plurality of successive images in time corresponding to a decoded word in the utterance (*col. 4, ln. 32 to col. 5, ln. 48, the visual feature extractor is the image analysis S2 in figure 1, which analyze*

movement of the lips. The timing information is interpreted as phonetic information that is used to process the captured images into one or more image segments); and

an image player operatively coupled to the visual feature extractor, the image player receiving and presenting each image segment with the corresponding decoded word (*figures 6-7, the decoded word can be presented audibly*).

5. Regarding claim 18, Bregler discloses that in an automatic speech recognition (ASR) system for converting an utterance of a speaker into one or more decoded words, a method for enhancing the ASR system comprising the steps of:

capturing a plurality of successive images in time representing body movements corresponding to one or more words in the utterance (*col. 4, ln. 1-31 & col. 7, ln. 1-11*);

associating each of the captured images with time information relating to an occurrence of the image (*col. 5, ln. 28-48, phonetic information is the time information*);

obtaining, from the ASR system, time ends for each decoded word in the utterance (*col. 8, ln. 57 to col. 9, ln. 15, phonetic information is the time information*);

grouping the plurality of images into one or more image segments based on the time ends, wherein each image segment corresponds to a decoded word in the utterance (*col. 9, ln. 1-16*); and

presenting an image segment with a corresponding decoded word (*figures 6-7, the decoded word can be presented audibly*).

6. Regarding claims 2 and 11, Bregler further discloses that the image player repeatedly presents one or more image segments with the corresponding decoded word (*col. 7, ln. 1-54*).

7. Regarding claims 3 and 12, Bregler further discloses a delay controller operatively coupled to the visual feature extractor, the delay controller selectively controlling a delay between an image segment and a corresponding decoded word in response to a control signal (*col. 9, ln. 48 to col. 10, ln. 57, by utilizing time warping or time-scaled modification techniques to realize synchronization is the delay*).

8. Regarding claims 6 and 23, Bregler further disclose that the body movements include lip movements of the speaker and mouth movements of the speaker (*col. 7, ln. 1-10*).

9. Regarding claim 20, Bregler further discloses the step of comparing the time information relating to the captured images with the time ends for a decoded word (*col. 10, ln. 13-30, indicative of comparing timing information and processing audio and image segments to achieve synchronization*), and determining which of the plurality of images occur within a time interval defined by the time ends of the decoded word (*col. 9, ln. 35-62*).

10. Regarding claim 21, Bregler further discloses the step of repeatedly displaying the image segment as an animation of successive images in time (*col. 8, ln. 12-44*).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bregler (US Patent No. 5880788) in view of Waters et al. (US Patent No. 6256046).

13. Claim 4 is dependent on claim 1, which is anticipated by Bregler et al. for the reasons noted above in the 102(b) rejection.

14. Regarding claim 4, Bregler further discloses a visual detector for monitoring a position of a user (*col. 4, ln. 1-31 & col. 7, ln. 1-11*).

Bregler does not disclose a position detector coupled to the visual detector, the position detector comparing the position of the user with a reference position and generating a control signal, the control signal being a first value when the position of the user is within the reference area and being a second value when the position of the user is not within the reference area; and a label generator coupled to the position detector,

the label generator displaying a visual indication on a display in response to the control signal from the position detector.

However, Waters et al. teach a position detector coupled to the visual detector, the position detector comparing the position of the user with a reference position and generating a control signal, the control signal being a first value when the position of the user is within the reference area and being a second value when the position of the user is not within the reference area (*col. 4, ln. 20-41*); and a label generator coupled to the position detector, the label generator displaying a visual indication on a display in response to the control signal from the position detector (*col. 5, ln. 28-59*). The advantage of using the teaching of Waters et al. in Bregler is to provide automated information to users in public places without human intervention.

Since Bregler and Waters et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Waters et al. in order to detect the presence of users so that the system provides automated information to users in public places without human intervention.

15. Regarding claim 5, Bregler further discloses that the label generator receives information from the ASR system, the label generator using the information from the ASR system to operatively position the visual indication on the display (*col. 10, ln. 13-30, phonetic information is used to synchronize audio and image data before display to the screen figures 6-7*).

16. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bregler (US Patent No. 5880788) in view of Liou et al. (US Patent No. 6580437).

17. Claim 7 is dependent on claim 1, which is anticipated by Bregler et al. for the reasons noted above in the 102(b) rejection.

18. Regarding claim 7, Bregler further discloses a display controller, the display controller selectively controlling one or more characteristics of a manner in which the image segments are displayed with the corresponding audio played (*col. 10, ln. 13-30*). Bregler fails to specifically disclose that the image segments are displayed with corresponding decoded speech text. However, Liou et al. teach that the image segments are displayed with corresponding decoded speech text (*figure 9*). The advantage of using the teaching of Liou et al. in Bregler is to provide subtext for the hearing impaired individuals.

Since Bregler and Liou et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Liou et al. in order to provide subtext for the hearing impaired individuals.

19. Regarding claim 8, Bregler further discloses that the display controller operatively controls the position of an image segment on the display (*col. 7, ln. 31-40*).

20. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bregler (US Patent No. 5880788) in view of Poggio et al. (US Patent No. 6250928) and further in view of Liou et al. (US Patent No. 6580437).

21. Claims 9 and 22 are dependent on claims 1 and 21, respectively, which are anticipated by Bregler et al. for the reasons noted above in the 102(b) rejection.

22. Regarding claims 9 and 22, Bregler does not disclose that the image player displays each image segment in a separate window on a display in close proximity to the decoded speech text corresponding to the image segment. However, Poggio et al. teach that the image player displays each image segment in a separate window (*col. 10, ln. 52-67 or figure 8*). The advantage of using the teaching of Poggio et al. in Bregler is to capture viseme transitions to enable engineer study the mouth shapes created by pronouncing each particular phoneme.

Since Bregler and Poggio et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Poggio et al. in order to capture viseme transitions to enable engineers study the mouth shapes created by pronouncing each particular phoneme.

The modified Bregler still does not disclose that each image segment is displayed in close proximity to the decoded speech text. However, Liou et al. further

teach that each image segment is displayed in close proximity to the decoded speech text (*figure 9*). The advantage of using the teaching of Liou et al. in Bregler is to provide subtext for the hearing impaired individuals.

Since Bregler and Liou et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Liou et al. in order to provide subtext for the hearing impaired individuals.

23. Claims 13-15, 17, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bregler (US Patent No. 5880788) in view of Goldenthal et al. (US Patent No. 5884267).

24. Regarding claim 13, Bregler discloses a method for presenting images representative of one or more words in an utterance with corresponding decoded speech, the method comprising the steps of:

capturing a plurality of images representing body movements corresponding to the one or more words in the utterance (*col. 4, ln. 1-31 & col. 7, ln. 1-11*);

associating each of the captured images with time information relating to an occurrence of the image (*col. 5, ln. 28-48, phonetic information is the time information*);

receiving, from an automatic speech recognition (ASR) system, phonetic information of a word decoded by the ASR system (*col. 8, ln. 57 to col. 9, ln. 15, phonetic information is the time information*);

aligning the plurality of images into one or more image segments according to the phonetic information received from the ASR system, wherein each image segment corresponds to a decoded word in the utterance (*col. 9, ln. 1-16*); and

presenting an image segment with a corresponding decoded word (*figures 6-7, the decoded word can be presented audibly*).

Bregler does not disclose a start time and an end time generated by the ASR system. However, Goldenthal et al. teach a start time and an end time generated by the ASR system (*col. 4, ln. 14-22*). The advantage of using the teaching of Goldenthal et al. in Bregler is to provide a means for synchronizing the audio and image segments.

Since Bregler and Goldenthal et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Goldenthal et al. in order to provide a means for synchronizing the audio and image segments.

25. Regarding claim 24, Bregler discloses a method for presenting images representative of one or more words in an utterance with corresponding decoded speech, the method comprising the steps of:

providing an automatic speech recognition (ASR) engine (*figure 2*);

decoding, in the ASR engine, the utterance into one or more words, each of the decoded having phonetic information associated therewith (*col. 8, ln. 57 to col. 9, ln. 15, phonetic information is the time information*);

decoded words having a start time and a stop time associated therewith ();

capturing a plurality of images representing body movements corresponding to the one or more words in the utterance (*col. 4, ln. 1-31 & col. 7, ln. 1-11*);

buffering the plurality of images by a predetermined delay (*col. 9, ln. 48 to col. 10, ln. 57, by utilizing time warping or time-scaled modification techniques to realize synchronization is the delay*);

receiving, from the ASR engine, data including the phonetic information of a decoded word (*col. 8, ln. 57 to col. 9, ln. 15, phonetic information is the time informatio*);

aligning the plurality of images into one or more image segments according to the phonetic information received from the ASR engine, wherein each image segment corresponds to a decoded word in the utterance (*col. 9, ln. 1-16*); and

presenting an image segment with a corresponding decoded word (*figures 6-7, the decoded word can be presented audibly*).

Bregler does not disclose a start time and an end time generated by the ASR system. However, Goldenthal et al. teach a start time and an end time generated by the ASR system (*col. 4, ln. 14-22*). The advantage of using the teaching of Goldenthal et al. in Bregler is to provide a means for synchronizing the audio and image segments.

Since Bregler and Goldenthal et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Goldenthal et al. in order to provide a means for synchronizing the audio and image segments.

26. Regarding claims 14-15, Bregler further disclose the step of selectively controlling a delay between when an image segment is presented and when a decoded word corresponding to the image segment is presented and selectively controlling a manner in which an image segment is presented with a corresponding decoded word (*col. 9, ln. 48 to col. 10, ln. 57, by utilizing time warping or time-scaled modification techniques to realize synchronization*).

27. Regarding claim 17, Bregler further discloses that the step of aligning the plurality of images comprises: comparing the time information relating to the captured images with the start and stop times for a decoded word (*col. 8, ln. 57 to col. 9, ln. 16*); and determining which of the plurality of images occur within a time interval defined by the start and stop times of the decoded word (*col. 9, ln. 1-16*).

28. Regarding claim 19, Bregler does not disclose the step of obtaining time ends for a decoded word from the ASR system comprises determining a start time and a stop time associated with the decoded word. However, Goldenthal et al. teach the step of determining a start time and a stop time associated with the decoded word (*col. 4, ln. 14-22*). The advantage of using the teaching of Goldenthal et al. in Bregler is to provide a means to synchronize audio signal to corresponding images.

Since Bregler and Goldenthal et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify Bregler by incorporating the teaching of Goldenthal et al. in order to provide a means to synchronize audio signal to corresponding images.

29. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bregler (US Patent No. 5880788) in view of Goldenthal et al. (US Patent No. 5884267) as applied to claim 13 above, and further in view of Waters et al. (US Patent No. 6256046).

30. Regarding claim 16, Bregler further discloses a visual detector for monitoring a position of a user (*col. 4, ln. 1-31 & col. 7, ln. 1-11*).

Bregler does not disclose a position detector coupled to the visual detector, the position detector comparing the position of the user with a reference position and generating a control signal, the control signal being a first value when the position of the user is within the reference area and being a second value when the position of the user is not within the reference area; and a label generator coupled to the position detector, the label generator displaying a visual indication on a display in response to the control signal from the position detector.

However, Waters et al. teach a position detector coupled to the visual detector, the position detector comparing the position of the user with a reference position and generating a control signal, the control signal being a first value when the position of the user is within the reference area and being a second value when the position of the user is not within the reference area (*col. 4, ln. 20-41*); and a label generator coupled to the position detector, the label generator displaying a visual indication on a display in

response to the control signal from the position detector (*col. 5, ln. 28-59*). The advantage of using the teaching of Waters et al. in Bregler is to provide automated information to users in public places without human intervention.

Since Bregler and Waters et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Bregler by incorporating the teaching of Waters et al. in order to detect the presence of users so that the system provides automated information to users in public places without human intervention.

Conclusion

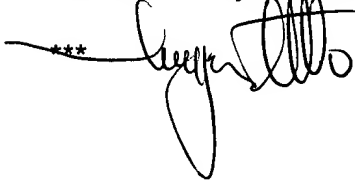
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Braida et al. (US Patent No. 6317716) teach a method for automatically cueing speech that is considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo



June 15, 2004


W. R. YOUNG
PRIMARY EXAMINER